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cancel the ball with absorbed water to the weight of the dry ball, such ratio being a maximum of 1.25:1.

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### REMARKS

Reconsideration of the various objections and rejections set forth in the Office Action dated November 28, 2000 is respectfully requested in view of the foregoing amendment and following remarks. Claims 1-6, 8-12 and 17-18 are pending in the application. Claim 1 has been amended to correct an informality. No claims have been added or cancelled.

Applicants' invention comprises a game ball having lower moisture absorption as compared to traditional leather covered game balls and some moisture resistant game balls. The lower moisture absorption properties of Applicants' game ball are the result of the game ball cover comprising a natural leather that has been tanned with chemicals to impart moisture resistance properties substantially throughout the entirety of the fibers of the leather. The tanning and resultant moisture resistant properties of the leather are imparted prior to assembly of the game ball and preferably prior to formation of the game ball cover from the natural leather sheet. Applicants' invention advantageously does not require treatment after assembly of the game ball to achieve improved moisture resistant properties. The lowered moisture absorption of Applicants' game ball may be further improved by use of an inventive moisture resistant lining. The moisture resistant lining may be used in conjunction with a cover comprising the inventive leather or with a cover comprising traditional leather having lesser moisture resistant properties.

Claim 1 was objected to because of an informality in the previous amendment of line 2. Claim 1 has been amended and is now in condition to overcome this objection.

Claims 1-6, 8-12 and 17-18 were rejected under 35 U.S.C. §103 as being unpatentable over U.S. Patent No. 4,755,187 to Friese et al in view of U.S. Patent No.

5,069,935 to Walters. As an initial matter the Examiner has admitted that the entirety of Applicants' claims were not fully examined. See for example the November 28, 2000 Office Action, page 3, lines 16-20, wherein the Examiner states, underlining added, "Regarding the recitation 'wherein when said ball is subjected to three 90 minute cycles of a rain test, . . . such ratio being a maximum of 1.25:1.', such is not given patentable weight because such is a 'method of testing' the 'end product' under various test conditions in order to determine its durability, i.e. 90 minutes cycles of a rain test, and it is considered to be functional language." See also the Examiner's similar admissions in the same Office Action at page 4, lines 3-5, page 4, lines 10-14, page 4, lines 15-27, page 4, lines 18-21, page 5, lines 3-5, page 5, lines 6-8, page 5, lines 13-15, page 5, lines 16-28, page 5, lines 19-21 and page 6, lines 3-5.

As stated in MPEP §2173.05(g), underlining added, "A functional limitation is an attempt to define something by what it does, rather than by what it is (e.g., as evidenced by its specific structure or specific ingredients). There is nothing inherently wrong with defining some part of an invention in functional terms. Functional language does not, in and of itself, render a claim improper. A functional limitation must be evaluated and considered . . . ." See also MPEP §2173.01 which states "A fundamental principal contained in 35 U.S.C. 112, second paragraph is that applicants are their own lexicographers. They can define in the claims what they regard as their invention essentially in whatever terms they choose so long as the terms are not used in ways that are contrary to accepted meanings in the art. Applicant may use functional language, alternative expressions, negative limitations, or any style of expression or format of claim which makes clear the boundaries of the subject matter for which protection is sought."

The Examiner admitted that the functional language in Applicants' claims was given no patentable weight. Applicants respectfully traverse the Examiner's assertions and rejections and assert that the Examiner should withdraw the pending rejections and reconsider the entirety of each of Applicants' claims, including the functional language, as mandated by the MPEP and legal precedent.

To establish a *prima facie* case of obviousness three basic criteria must be met. First there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or combine the reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. See M.P.E.P. §2143. As summarized in the MPEP, "The Examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness."

The Walters reference in column 1 teaches that tanned leather is the preferred material for game balls such as a football. The Walter's reference in column 1, lines 17-20 states "Along with the pebbled finish, football leather should have a tacky finish that gives the ball a good feel for gripping while throwing or catching the football."

The Walters reference in column 1, lines 33-44 reemphasizes the importance of this tacky feel, stating "The key to leather is its tanned-in tack, which greatly aids in the performance and feel of the football. . . . The tanned-in tacky feel provides a maximum amount of gripping aid without causing the football to be too sticky, which could result in release problems when throwing the ball." As stated within the Walters' reference the tackiness of the leather is so important that leather having such tack is the material of choice for both professional and amateur governing organizations. As further stated by Walters, changing this tacky leather could affect the outcome of a game.

The Examiner admits in the November 28, 2000 Office Action that the Friesse reference does not indicate use of the leather therein for game balls in general or American footballs in particular. In fact, leather tanned using the process of the Friesse reference is described therein as "soft . . . with a . . . lardy feel and are particularly suitable for the production of shoe upper leather . . ." or "Soft . . . having a pleasant feel . . ." See Friesse, column 3, lines 45-47 and column 4, lines 37-38 respectively, underlining added. There is no teaching or suggestion that leather tanned by the Friesse process is, or can be, tacky.

As previously noted the MPEP states that there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or combine the reference teachings. Further, the prior art references must be considered in their entirety, including portions that would lead away from the claimed invention. W.L. Gore & Associates, Inc. v. Garlock, Inc., 220 USPQ 303 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984); see also M.P.E.P. section 2141.02. The Walter's reference emphasizes the need for the leather of game ball covers to have a tacky feel. The Friese reference teaches that the tanning process therein provides leather that is soft with a lardy feel. Clearly, a lardy feel is the opposite of a tacky feel. Thus the references of both Friese and Walters teach against combination with each other. Further, The Friese reference does not teach or suggest that the tanning process therein produces leather having a tacky feel. Even if the references are improperly combined a person of ordinary skill in the art would have no reasonable expectation of success in tanning leather according to the Friese process and obtaining a leather material having the tack required by Walters. Again the references of both Friese and Walters teach against combination with each other. For at least these additional reasons the invention embodied in Applicants' claims 1-6, 8-12 and 17-18 is not *prima facie* obvious over the references of Friese and Walters and is therefore patentable.

As previously noted the MPEP states that the prior art reference (or references when combined) must teach or suggest all the claim limitations. The Examiner admits the Friese reference is deficient in teaching or suggesting that leather tanned as instructed therein can be used in game balls. The Examiner attempts to make up for these deficiencies asserting 'Regarding the preamble recitation that the ball is a 'game ball' no patentable weight is given to the term 'game ball' because such is a functional term. The leather can be used on any product including a game ball.'" See November 28, 2000 Office Action, page 3, lines 13-15. The Examiner's assertions are contradicted by the text of the Walters reference at column 1, lines 33-44, which as discussed above teaches explicitly that not every leather is suitable for use as a game

ball cover. For at least these additional reasons the invention embodied in Applicants' claims 1-6, 8-12 and 17-18 is not *prima facie* obvious over the references of Frieze and Walters and is therefore patentable.

Additionally, the Examiner previously admitted that the Walters reference teaches away from a water spray test as unreliable and erratic (see July 3, 2000 Office Action, page 4, point 6, fourth paragraph). The Frieze reference appears to teach immersion of the sample in water and does not teach or suggest a spray type test. See Frieze, column 4, lines 42-45; column 5, line 30; and column 6, line 12. Clearly the cited references, singly or in combination, do not teach or suggest Applicants' rain test or rain test results. The Examiner attempts to make up for these deficiencies by asserting "Regarding the recitation 'wherein when said ball is subjected to three 90 minute cycles of a rain test, . . . such ratio being a maximum of 1.25:1.', such is not given patentable weight because such is a 'method of testing' the 'end product' under various test conditions in order to determine its durability, i.e. 90 minutes cycles of a rain test, and it is considered to be functional language." As discussed above, the Examiner's decision to ignore the functional limitations of Applicants' claims is contrary to instruction from the MPEP and legal precedent. Clearly even if the cited references are improperly combined the combination fails to disclose each and every feature of Applicants' invention as embodied in the claims. For at least these additional reasons the invention embodied in Applicants' claims 1-6, 8-12 and 17-18 is not *prima facie* obvious over the references of Frieze and Walters and is therefore patentable.

Arguendo, even if the Walters and Frieze references are improperly combined, Applicants assert that such combination highlights the superiority of Applicants' invention over the existing art. The Walters reference in the table at column 8, lines 21-30, shows that the known Rawlings brand ST-5 football has superior moisture resistance properties to any of the water repellant-coated footballs of the Walters' invention. Applicants have also used a Rawlings ST-5 football as a comparative example to the game balls of Applicants invention. As discussed in the Response

dated September 14, 2000, Applicants' inventive game ball is superior to the Rawlings ST-5 football within the claimed ranges.

As discussed in Applicants' specification a football weighs about 400 grams (396 gms for example 1, see note 2 on page 15; 402 gms for comparative example 1, see note 2 on page 17; 419 gms for comparative example 2, see note 2 on page 19; 404 gms for comparative example 3, see note 2 on page 21; 404 gms for comparative example 4, see note 2 on page 23 and 390 gms for comparative example 5, see note 2 on page 25). The Friese reference discusses the water absorbed by leather tanned using the process therein. While not stated in that reference, Applicants assume the leather was immersed or soaked to arrive at these figures. Applicants acknowledge that Examples 1C and 2 recite water absorption figures for a 6 hour test, however there is no teaching or suggestion that the amount of water absorbed after 1 hour was significantly less. Assuming the Examiner's hypothetical 400 gm football was constructed using leather tanned by the process of Friese, and using the water uptake figures recited in Friese, the football would absorb the following amounts of water.

Table 1		
Friese example	water uptake recited	water amount absorbed
Example 1A, col. 4, line 44	70%	$400 \times .70 = 280$ gms
Example 1B, col. 4, line 44	34%	$400 \times .34 = 136$ gms
Example 1C, col. 4, line 45	< 20 %	$400 \times .20 = 80$ gms
Example 2, col. 5, line 30	< 20 %	$400 \times .20 = 80$ gms
Example 3, col. 6, line 12	35 %	$400 \times .35 = 140$ gms

Thus, the hypothetical football proposed by the Examiner absorbs between about 80 gms and 280 gms of water. The results of Table 1 are compared with the water absorption results taught in the Walters reference and in Applicants disclosure in Table 2 below. Applicants' cycle number and times correspond to the range recited

in claims 1, 2, 5, 6 and 12.

Table 2			
Sample	Citation	submersion test result	rain test result
		(gms)	(gms)
Applicants' game ball with lining three, 90 minute cycles	App. Table 1(A)	----	51.8
Applicants' game ball without lining three, 90 minute cycles	App. Table 2(A)	----	103.5
ST-5 game ball, sample A three, 90 minute cycles	App. Table 3(A)	----	127.7
ST-5 game ball, sample B three, 90 minute cycles	App. Table 4(A)	----	142.3
Hypothetical game ball using Friese treated leather	Table 1 of this Response	80 - 280	----
ST-5 game ball	Walters, C8, L23	43.9	----
Walters' game ball, roller-coat panel/ spray outside of game ball	Walters, C8, L24	48.2	----
Walters' game ball, panel Submersion/spray outside of game ball	Walters, C8, L26	53.9	----
Walters' game ball, panel Submersion/no outside spray	Walters, C8, L28	140.5	----
Untreated tanned leather football	Walters, C8, L22	145.8	----

The difference in test methods makes comparison of the quantitative water absorption between the test results of Friese, Walters and Applicants impossible. However, the fact that Applicants' inventive game balls have lower moisture absorption than the ST-5 game balls in the rain test, and the fact that the ST-5 game ball has lower moisture absorption than either the Walters' game balls or the Examiner's hypothetical game balls in the submersion test, makes it clear that qualitatively, Applicants' game balls absorb less water than any of the ST-5 game balls, the Walters' game balls or the Examiner's hypothetical game balls. Given the admission that the Walters' game balls exhibit erratic and unreliable results under spray testing, one can only conclude that if the Walters' game balls had been tested under Applicants' rain test, they would have performed worse than shown in the above

table.

As can be seen through the above examples, Applicants' inventive game ball has moisture resistance superior to that of any of the Rawlings ST-5 game balls (as established by testing) or the Walters' game balls (as established by qualitative comparison of published results) or the Examiner's hypothetical game balls (as established by qualitative comparison of an extrapolation of published results). Since the cited references of Walters and Carlson, either singly or in combination, do not teach or suggest all of the features of Applicants' claims 1-6, 8-12 and 17-18, those claims are patentable for at least these additional reasons.

As previously stated the MPEP states that to establish a *prima facie* case of obviousness there must be a reasonable expectation of success in achieving the claimed invention given the prior art. As discussed above, Applicants' inventive game ball has moisture resistance superior to any of the Rawlings ST-5 game balls, the Walters' game balls or the Examiner's hypothetical game balls. Thus, even if the cited references are improperly combined, there is no reasonable expectation of success in achieving Applicants' claimed game ball. For at least these additional reasons the invention embodied in Applicants' claims 1-6, 8-12 and 17-18 is not *prima facie* obvious over the references of Friese and Walters and is therefore patentable.

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In summary, Applicants have addressed each of the objections and rejections within the present Office Action, either by amendment or remarks. The cited references have been found lacking in both anticipatory and suggestive effect. In fact, the disclosure within the cited references illustrates the superiority of Applicants' moisture resistant game ball over the existing art. It is believed the application now stands in condition for allowance, and prompt favorable action thereon is earnestly solicited.

Respectfully submitted,

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